

4. On a fourth Collection of Birds from the Pelew and Mackenzie Islands. By Dr. G. HARTLAUB, F.M.Z.S., and Dr. O. FINSCH, C.M.Z.S.

[Received December 6, 1871.]

It was in the year 1867 that we had the first opportunity of reporting to this Society* on a small collection of birds from the Pelew and Mackenzie Islands, which, from their geographical position, may be considered of especial interest. These groups of islands are close to each other, connected by several small islets, and form the most western corner of the extensive archipelago of the Carolines. Since that date we have received two other collections from the Pelews†, forwarded to us through the Museum Godeffroyanum of Hamburg and the Museum of Altona (Dr. Semper), which have extended our knowledge of the avifauna of this group to a high degree. It is with great satisfaction that we now record the receipt of a new and still more complete collection from the localities mentioned above, sent to us for scientific determination by Mr. Johann Cesar Godeffroy, to whom science is greatly indebted for the exploration of some almost unknown groups of islands in the Pacific.

This collection was formed by Mr. Kubary (a young traveller in the service of Mr. Godeffroy, whom we had the pleasure of mentioning in terms of commendation in our last article on birds of Savai, P. Z. S. 1871, p. 22) on the island of Uap, of the Mackenzie group, and by Capts. Heinsohn and Peters, masters of vessels belonging to Mr. Godeffroy, partly at the same island, but chiefly on the Pelews. Thanks to the zeal and diligence of these gentlemen, we are now in the pleasing situation of being able to give a far more complete account of the ornithology of these interesting islands. Not only do we become better acquainted with some little-known species, but the total number of species has been increased. Amongst these additions no less than nine we have the pleasure of introducing as new; and what is more important, some of them appertain to genera not yet known from this locality—such as *Noctua*, *Caprimulgus*, *Campephoga*, and *Phlegoenas*.

Our last list of Pelew birds embraced forty-one species, now we have to add eleven, making the total number fifty-two. Of the Mackenzie group or Ulathi, only the island of Uap has been explored. Here we were previously acquainted with six species only (*Myzomela rubratra*, *Monarches godeffroyi*, *Calornis kittlitzii*, *Ardea sacra*, *Numenius phaopus*, and *Tachypetes minor*); now we are able to enumerate twenty. The total number of known birds of this western portion of the Carolines is sixty-four; but of this number

* Dr. Hartlaub, "On a Collection of Birds from some less-known Localities in the Western Pacific." P. Z. S. 1867, pp. 828-832.

† Drs. Hartlaub and Finsch, "On a Collection of Birds from the Pelew Islands," *ib.* 1868, pp. 4-9, and "Additional Notes on the Ornithology of the Pelew Islands," *ib.* pp. 116-118.

only two occur on both groups, and are widely distributed in the archipelago, namely *Myzomela rubratra* and *Calornis kittlitzii*. The rule in the geographical distribution of birds, that islands close to each other are generally inhabited by certain allied species of the same genus, which represent each other, is manifested very clearly with respect to the birds of the Pelew and Uap. The two islands have each two species of *Zosterops*, one *Rhipidura*, one *Campephaga*, and one *Phlegænas*. The avifauna of Pelew, better known than that of Uap, is richer in peculiar species, possessing twelve, whereas Uap has only six, which species are marked in our subjoined list with an asterisk. Of the other forty-six species known in these groups, twenty-seven are widely distributed over the Indo-Malayan region and the Pacific; but there is a strong tendency towards the birds of the former region, about sixteen being Indo-Malayan, whereas only seven are peculiar Pacific forms. Sixteen species may be regarded as stragglers, some of which are of very rare occurrence, such as *Falco peregrinus* and *Nycticorax griseus*, which visit these islands during their migrations. Nine of the species are European. Two species occur also in Australia.

In comparing the ornithology of these groups of islands with those of other Central-Polynesian groups, and taking into consideration their far less extent, we find that, nevertheless, they are considerably richer. Thus, the Vitis possess sixty species, amongst which eighteen are peculiar; whereas the Navigator group has only fifty, of which sixteen are peculiar; and the Friendly Islands, out of thirty-seven species, only six peculiar. This interesting fact, no doubt, must be considered a result of the far stronger influence of Indo-Malayan species which predominates in the western Carolines.

As a singular fact in relation to the general view of the ornithology of the Western Carolines, we may notice the absence of Fringilline birds and of Parrots, which, in respect of the latter, is the more remarkable, as we know of the occurrence of a very interesting species (*Domicella rubiginosa*) on the small island of Punipet, of the Seniavin group, which forms the outermost eastern corner of the Carolines archipelago.

Mr. Kubary has given us some meagre notices about the island of Uap and its ornithic life. According to these the interior of Uap consists of a hill-like plateau, which is destitute of trees, and only covered with grass. This hilly interior is surrounded by a narrow strip of wooded land, of a garden-like appearance, not broader than from one to two English miles, which possesses a richer vegetation of areca-palms, banyans, bamboos, and, nearer to the shore, of cocoa-trees. In general the vegetation is much poorer than in Upolu or other Central-Polynesian islands. On the plateau birds are very rare. Mr. Kubary notices only the Kuling (*Strepsilas*) and *Numenius phæopus*, and observed once a small bird, which he believes to have been a *Collocalia*, but which he was not fortunate enough to secure. The greatest amount of bird life is found in the wood-region. Here *Myzomela*, *Zosterops*, *Campephaga*, *Phlegænas*, *Ortygometra*, and a species of half-wild *Gallus* occurs; the *Myzomelæ*,

Zosteropides, and *Monarchæ* are not unfrequently seen near the houses of the natives. On the shores, *Ardeæ sacra* and *lepida*, *Actitis incanus*, and sea-birds (*Sterna melanauchen*, *Gygis alba*) are numerous.

We commence with a list of all the known species of western Carolinian birds:—

	Pelew group.	Mackenzie group.
1. <i>Falco peregrinus</i>	*
*2. <i>Noctua podargina</i>	*	
*3. <i>Caprimulgus phalæna</i>	*	
4. <i>Collocalia vanicorensis</i>	*	
5. <i>Halcyon chloris</i>	*	
6. — <i>albicilla</i>	*	
7. — <i>reichenbachi</i>	*	
8. — <i>sanctus</i>	*	
9. <i>Myzomela rubrata</i>	*	*
*10. <i>Psamathia annæ</i>	*	
*11. <i>Zosterops semperi</i>	*	
*12. — <i>hypolais</i>	*
*13. — <i>oleaginea</i>	*
*14. — <i>finnschi</i>	*	
15. <i>Turdus obscurus</i>	*	
*16. <i>Rhipidura lepida</i>	*	
*17. — <i>versicolor</i>	*
*18. <i>Myiagra erythrops</i>	*	
*19. <i>Monarches godeffroyi</i>	*
*20. <i>Campephaga nesiotis</i>	*
*21. — <i>monacha</i>	*	
22. <i>Artamus leucorhynchus</i>	*	
*23. <i>Rectes tenebrosus</i>	*	
24. <i>Calornis kittlitzi</i>	*	*
25. <i>Cuculus canorus</i>	*	
26. — <i>striatus</i>	*	
*27. <i>Ptilinopus pelewensis</i>	*	
28. <i>Carpophaga oceanica</i>	*	
*29. <i>Phlegœus canifrons</i>	*	
*30. — <i>yapensis</i>	*
*31. <i>Megapodius senex</i>	*	
32. <i>Gallus bankiva</i>	*	
33. <i>Charadrius fulvus</i>	*	*
34. — <i>geoffroyi</i>	*	
35. — <i>cantianus</i>	*	
36. <i>Strepsilas interpres</i>	*	*
37. <i>Ardea sacra</i>	*	*
38. — <i>sinensis</i>	*
39. <i>Nycticorax griseus</i>	*
40. — <i>manillensis</i>	*	
41. — <i>goisagi</i>	*	
42. <i>Numenius phæopus</i>	*	*
43. <i>Tringa acuminata</i>	*	
44. — <i>minuta</i>	*	
45. <i>Actitis incanus</i>	*
46. — <i>hypoleucus</i>	*	
47. <i>Rallina fasciata</i>	*	
48. <i>Rallus pectoralis</i>	*	

	Pelew group.	Mackenzie group.
49. <i>Ortygometra quadristrigata</i>	*	*
50. <i>Porphyrio melanonotus</i>	*	
51. <i>Anas superciliosa</i>	*	
52. <i>Fuligula cristata</i>	*	
53. <i>Puffinus dichrous</i>	*	
54. <i>Sterna longipennis</i>	*	
55. — <i>melanaucheu</i>	*	*
56. — <i>lunata</i>	*	
57. <i>Anous stolidus</i>	*	
58. — <i>tenuirostris</i>	*	
59. <i>Gygis alba</i>	*	*
60. <i>Phaëton candidus</i>	*	
61. <i>Dysporus piscator</i>	*	
62. — <i>sula</i>	*	
63. <i>Carbo melanoleucus</i>	*	
64. <i>Tachypetes minor</i> .....	...	*
	53	20

1. FALCO PEREGRINUS, L.

A young male from Uap, captured during the north-east monsoon in November 1870 (*Kubary*). Not yet recorded from this locality.

Long.	al.	caud.	rostr.	tars.	dig. med.	ung.
—	6"	4'''	8½'''	22'''	22'''	8'''
13½"	6	10	10	23	25	9 (De Castries Bay.)

In a former collection, forwarded by Mr. Godeffroy, we received a similarly coloured specimen from De Castries Bay, east coast of Amoorland (*Capt. Meyer*).

2. NOCTUA PODARGINA, n. sp.

Dilute ferrugineo-rufa, vix conspicue transversim variegata maculisque minutis albidis hinc inde notata; capite pallidius fulvescente, indistincte fasciolato; uropygio et supracaudulibus crebrius albo maculatis; maculis nonnullis majoribus albis in alarum tectricibus; alis pallide rufis; remigibus irregulariter et rarius fasciatis, pogonio interno obsolete fuscescentibus; rectricibus pallide rufis, obscurius fasciatis; pectore et abdomine in fundo lætius rufescenti-fulvo irregulariter fasciolato et maculato; subalaribus albido fuscoque fasciatis; rostro pallido; pedibus obscuris.

Long. tot. circa 11", rostr. a fr. 8"', al. 6" 2"', caud. 3", tars. 1".

One very indifferent specimen. The whole bird of an obsolete pale rufous colour, mottled with indistinct and very narrow transverse blackish and fulvous bands; inferior part of back, upper tail-coverts, wing-coverts, and scapularies irregularly marked with white sublanceolate or roundish greater or smaller spots; these spots are surrounded by a blackish margin; wing-feathers with a few indistinct and distant blackish bands, the inner vanes towards the base more

blackish ; under wing-coverts barred whitish and fuscous ; feathers of the face, throat, and sides of head paler, distinctly and very narrowly banded ; there appears to be a pale superciliary stripe ; breast and abdomen pale rufescent, with blackish vermiculations and larger whitish darkly margined spots, or short, broad, transverse bands ; beak pale yellowish ; feet dark ; the upper half of the tarsus is feathered.

The collection contains only a single specimen, collected by Capt. Heinsohn at the Pelews. All our efforts to refer this little Owl to any known species have been without success ; we must therefore consider it to be new. Its nearest ally seems to be *N. ochracea*, Schleg., from Celebes. The specimen is apparently in full dress ; but whether the rufous plumage may be only a phase, as in some other Owls, we are unable to decide. The light-coloured beak and the half-naked tarsi and toes, without any hairs, are especially to be noticed.

3. CAPRIMULGUS PHALÆNA, n. sp.

Supra in fundo rufescente nigro transversim lineolatus striisque latioribus longitudinaliter notatus ; uropygio et supracaudalibus distinctius fasciatis ; remigibus majoribus nigris, medio dilute rufo bimaculatis ; tectricibus et scapularibus pulchre et largius fulvo, rufo nigroque variegatis ; subalaribus rufo nigroque fasciatis ; macula jugulari alba ; abdomine in fundo dilute rufescenti-fulvo fasciatis strictioribus nigris notato ; subcaudalibus obsolete fulvo-albidis, rarius nigro fasciatis ; reatricibus nigris, fasciis vermiculatis rufis maculatim notatis ; rostro et pedibus nigris.

Long. tot. circa 10'' 3''', rostr. a fr. 5''', al. 6'' 3''', caud. 4'' 4''', tarsi 6''.

The whole head above reddish brown, minutely mottled with dark brown, and each feather with a broad black shaft-stripe, forming three irregular longitudinal stripes ; feathers of the hind neck and mantle dark rufous brown, with dusky patches along the shafts, and mottled indistinctly with dusky ; feathers of the sides of neck with a large rufescent middle spot, forming a distinct patch, which is in connexion with the bright rufescent ear-region ; larger shoulder-feathers rufous brown, towards the basal half light brownish grey, mottled minutely with dark brown, and with a large apical spot of black on the outer vane, which shows some small rufescent spots ; this black is bordered on the upper shoulder-coverts externally broadly with light fulvous yellow, forming along the shoulders a black median stripe, edged externally by an indistinct fulvous-yellow line ; rump and upper tail-coverts rufous brown, mottled with dusky, and barred with narrow black lines, more distant on the upper tail-coverts ; primaries black, on the basal half of the outer web with three fulvous spots, of which the third is larger and principally visible ; the other primaries have six rufous smaller marginal spots, which on the secondaries form irregular cross bands, the first four remiges with a fulvous median spot on the inner web ; the remaining

primaries with six rufescent spots internally, which on the secondaries form irregular narrow cross bands; the last of the secondaries greyish fulvous, mottled with pale brown, and across the shaft with six black lines; the first quill has on the basal half four obsolete rufescent marginal spots; the shafts are black, and dark brown beneath; tectrices of the primaries black; tectrices of the secondaries black, with rufescent marginal and apical spots, mottled minutely with dusky; the remaining upper wing-coverts are marked in the same manner, but the rufous spots are smaller, so that the smallest upper wing-coverts near the cubitus are black with narrow rufous edgings; the greater median wing-coverts show a large fulvescent apical patch on the outer web, forming a crossband-like conspicuous mark; under wing-coverts blackish brown, barred narrowly with rufous; feathers, the region beneath the eye, along the angle of mouth, chin and sides of throat rufous, with black apical edgings; throat apparently divided into two, with patches, by a narrow rufous black-barred median line; crop and breast of a rufous-brown ground-colour, each feather towards the tip lighter, changing into greyish fulvescent, finely mottled with dark brown, forming speckled cross lines, and a narrow black shaft-stripe; remaining underparts pale fulvescent, with obsolete narrow dark cross lines, broader and more distinct on the under tail-coverts; three outer tail-feathers black, with nine rufous cross bands, which on the outmost are narrower (here ten), on the second and third broader, and mottled with dusky; on the inner web these rufous cross bands are only indistinctly indicated; the fourth tail-feather shows the nine rufous cross bands broader, distinct also on the inner web, and mottled more with dusky; the two middle tail-feathers have a rufous-brown ground-colour, internally changing into grey-brown, speckled with dusky, and nine irregular black bars. Bill black, bristles (eight) strongly developed, black; feet and nails hornish brown; the tarsus feathered at the basal half, rufescent; shafts of the tail-feathers black.

Long. al.	caud.	rostr.	rict.	tars.	dig. med.	ung.
6" 3'''	4" 4'''	5'''	12½'''	6½'''	7½'''	3'''

Of this species a single specimen was collected by Capt. Heinsohn in the Pelews—a locality whence no *Caprimulgin* bird has been yet recorded. The specimen is evidently a female; and the male, no doubt, will present some considerable differences; perhaps we may expect it will have the primaries as well as the outer tail-feathers spotted with white. Although female *Caprimulgi* are much more difficult to determine, and it might be considered somewhat hazardous to establish a species on an isolated specimen, nevertheless we are obliged to do so, having endeavoured to unite this specimen with any of the known species without success.

C. phalæna seems to come nearest to *C. jotaka*, Temm., from Japan, and *C. stictomus*, Swinh. (*Ibis*, 1863, p. 250), from Taiwan, but may be distinguished, besides strongly contrasting differences in coloration, by its smaller size; the latter besides has naked tarsi.

Mr. G. R. Gray enumerates (*Hand-l. of B. i. p. 57*) two Night-

jars from the Philippines, *C. griseatus* and *C. manillensis*, but both are still undescribed.

4. COLLOCALIA, sp. ?

Mr. Kubary observed once in the island of Uap a small bird, which he believes to have been a species of *Collocalia*.

5. HALCYON CHLORIS (Bodd.) ; F. & H. Vög. Ost-Afr. p. 165.

Halcyon albicilla, part., Hartl. P. Z. S. 1867, p. 828 (green-headed spec.); H. & F. *ib.* 1868, p. 4; Sharpe, Kingfishers, t. 73 (hind fig.).

In our first publication on the Birds of the Pelew Islands we noticed, under the head of *H. albicilla*, besides specimens in the normal white-headed plumage, some which showed more or less greenish-blue feathers on the crown, and one with the whole upper head uniform greenish blue like the back, supposing this latter to be the young bird. Unfortunately we had overlooked that the young of the true *H. albicilla* had been already made known by Prof. Schlegel (Vogels van Nederl. Indië, Ijsvogels, p. 32, pl. 11. f. 4), who received a very young specimen, shot by the late Dr. Bernstein the 12th September, 1861, in the island of Morotai. This specimen, represented in the plate cited above, resembles very much the old bird, having already the head white, but with some greenish-blue feathers on the top, like those we received from the Pelews. In a second collection from this locality we got three green-headed specimens; and the last collection (Capts. Heinsohn and Peters) contains ten specimens, all with greenish-blue heads.

From this excellent and instructive series we learn that we were quite mistaken in supposing the green-headed birds to be the young of *H. albicilla*, and that they belong to a distinct species, which we are not able to distinguish from the widely distributed *H. chloris*. We have before us five old specimens from India and Java which agree in every respect with them. The blue of head and back in some specimens changes more or less into bluish green; but there are all sorts of intermediate forms between the birds with blue and those with green back; the black band through the eyes and round the nape, as well as the white occipital spot, are also more or less developed, the feathers of the former are more or less tipped with greenish blue. Three other specimens show certain signs of the young bird, in having the feathers of the sides of neck and breast, as well as those of the white neck-collar, with narrow dark edgings, giving them an undulating appearance; in these the whole head above is darker and of a dull olive-green; in one the white mark behind the nostrils is tinged with pale buff. Two younger specimens with quills not full-grown, and tail-feathers, and short hornish-white-tipped bills, so characteristic of young Kingfishers generally, resemble altogether the young of the true *chloris*. The black surrounding the nape forms a broader patch; the line above the loreal region, as well as the breast and sides of belly, are tinged faintly with buff, and bear narrow blackish margins.

We must remark that the Pelew specimens seem to be generally

of a larger size; but after comparing them with the valuable measurements given by Prof. Schlegel, as reproduced hereafter, we see no necessity for separating them as a distinct species, though, perhaps, some naturalists, not having specimens enough at their disposal, might be willing to do so.

H. chloris breeds on the Pelew Islands; the collection contains a single egg, which is of a uniform white.

A closely allied species is our *H. cassini* (Orn. Centr. Polyn. p. 40; Cass. Un. St. Expl. Exp. pl. 16. f. 1), which the excellent monographer of the Kingfishers declares to be "certainly identical" with *H. sacra*. This he must allow us to doubt. We have examined extensive series of *H. sacra* from the Navigators' and the Tonga group, but have never seen any authentic specimen from the Viti group belonging to that species. All the specimens from the latter group were found to belong to *H. cassini*; so we are of opinion that this species will prove to be peculiar to the Vitis.

Long al.	caud.	rostr.	Lat. rostr.	Tars.	Dig. med.	
4 1-4 6	2 6-3 0	21 -25	7½-8	7	8½	ad., Pelew... (13 spec.).
3 7-3 9	1 7-2 0	14½-15	6-6½	...	...	juv., Pelew... (3 spec.).
3 9-4 0	2 0-2 5	16-20	...	...	...	Philippines... (8 spec.), ap. Schleg.
3 11-4 1	2 6	18-20	...	...	...	Bangka (4 spec.), ap. Schleg.
4 0-4 2	2 6-2 7	19-21	...	...	...	Java..... (3 spec.), ap. Schleg.
	3 10	2 5	19	6	...	Java Brem. Mus.
3 11-4 0	2 5-2 6	18-19	...	...	...	Borneo (3 spec.), ap. Schleg.
3 11-4 1	2 6-2 7	18-19	...	...	...	Timor (3 spec.), ap. Schleg.
	4 2	2 5-2 7	17-20	...	...	Halmahera . (10 spec.), ap. Schleg.
	4 1	2 7	19	...	...	Banda (1 spec.), ap. Schleg.
4 0-4 3	2 5-2 9	18-20	...	...	...	Amboina..... (4 spec.), ap. Schleg.
	4 3	2 7	21	...	...	Ceram (2 spec.), ap. Schleg.
	3 10	2 5	20	...	...	New Guinea . (1 spec.), ap. Schleg.
	3 10	2 5	19	6¼	...	ad., E. Indies (1 spec.), Brem. Mus.
	3 5	...	12	6	...	juv., E. Indies (1 spec.), Brem. Mus.
	3 11	2 5	20½	6½	...	East Africa ... (1 spec.), Brem. Mus.

6. MYZOMELA RUBRATRA, Less.; Hartl. P. Z. S. 1867, p. 829; H. & F. *ibid.* 1868, pp. 5 and 116.

Six specimens from the Pelews (*Cpts. Heinsohn and Peters*), and eight from Uap (*Kubary*). Amongst the latter there are three specimens, marked by Mr. Kubary as females ("breeding-season"), which agree with the description of the young bird given by us (P. Z. S. 1868, p. 5). They are of a dark olive-brown, intermixed more or less with red feathers; in some nearly the whole head and underparts are red, which shows these variations to be clearly signs of immaturity. Probably the adult female in full dress does not differ from the male.

Long. al.	caud.	rostr.	tars.	
2'' 7'''-2'' 10'''	20'''-24'''	6'''-7¼'''	9-10'''	(13 spec.).
2 4½	20	6	9	jun.

“Umel” of the natives (*Kubary*).

Mr. Kubary has also sent a nest, said to be of this species. It has a cup-shaped form, is deeper than broad, and was placed between the furcation of a small twig. It consists of stems of grass connected with cobwebs, and is somewhat loosely constructed.

A very interesting account of this species on Ualan is given by v. Kittlitz (*Denkwürdigkeiten einer Reise, &c. i.* 1858, pp. 364 & 381).

7. *PSAMATHIA ANNÆ*, Hartl. & Finsch, P. Z. S. 1868, pp. 5 & 116.

One specimen from Pelew (*Capt. Heinsohn*).

8. *ZOSTEROPS SEMPERI*, Hartl. ; H. & F., P. Z. S. 1868, p. 117.

Two specimens from the Pelew Islands (*Capt. Heinsohn*). In one, the chin and throat are rather of a sulphur-yellow. The nearest ally is *Z. meyeri*, Bp., which is smaller, and has a narrow black loreal stripe, and a yellow rump.

9. *ZOSTEROPS HYPOLAIS*, n. sp.

Minor. *Supra in fundo dilute cinerascence pallido virescente lavata, subtus pallide flavescens, pectore abdomineque cinerascenti-sordidulis; subalaribus albis; subcaudalibus dilute flavis; remigibus et rectricibus nigricantibus, dorsi colore marginatis; annulo periophthalmico minus distincto; pedibus plumbeo-nigricantibus.*

Upper parts of a pale greyish green, throat and under tail-coverts a pure but very pale whitish yellow; breast and abdomen of a mixed pale grey and pale yellow; wing- and tail-feathers pale blackish, margined with the greenish colour of the back; under wing-coverts and inner margins of remiges white; eye-ring indistinct; beak fuscous, the under mandible paler, except at the tip; feet plumbeous.

Long. tot. c. 4", rostr. a fr. 5", al. 26", caud. 18", tars. 9".

Mr. Kubary has sent three specimens of this interesting new *Zosterops* from the island of Uap, which agree with each other. The absence of a distinct white eye-ring is the principal feature of this dull-coloured species. *Z. conspicillata*, Kittl., from Guaham, is its nearest ally, but is distinguished by the white front and eye-ring.

10. *ZOSTEROPS OLEAGINEA*, n. sp.

Major. *Tota oleagineo-virescens, subtus parum dilutior, nonnihil flavo-fulvescente lavata; regione parotica nigricante; annulo periophthalmico niveo; remigibus et rectricibus fusco-nigricantibus, dorsi colore limbatis; rostro infuscato, mandibula flavida, apice fusca; pedibus pallidis.*

General colour a deep oil-green, with a decided fulvous hue; underparts a little paler, and a little more yellowish; eye-ring satin-white; ears blackish; upper and under tail-coverts with a slight rufous tinge; wing- and tail-feathers blackish, with oil-green

margins; under wing-coverts whitish grey; beak fulvous, under mandible, except at the tip, yellowish; feet pale, probably yellow; iris reddish white.

Long. tot. circa 4" 7"', rostr. a fr. 6½"', al. 2" 7"', caud. 1" 8"', tarsi. 10'''.

The colouring of this typical species of *Zosterops* is quite unique, and does not resemble that of any other.

The collection contains three specimens, male and female, discovered and sent by Mr. Kubary from the island of Uap.

11. ZOSTEROPS FINSCHI, Hartl.

Tephras finschi, Hartl. P. Z. S. 1868, p. 6, pl. 3, and *ibid.* p. 117.

One specimen from Pelew (*Capt. Heinsohn*).

On comparing again this curious bird with the allied *Zosteropine* members, we have come to the conclusion that *Tephras* can be considered only a subgeneric division of *Zosterops*. The wings, having the first quill-feather spurious, are the same as in true *Zosterops*, the bill corresponds with that of others (for instance, *Z. oleaginea*, which also has a somewhat rotundate tail). The want of a white eye-ring is the only point by which *Tephras* could be separated.

A near ally seems to be *Z. cinerea*, Kittl., from Ualan.

12. TURDUS OBSCURUS, Gmel.; Finsch, Journ. of Orn. 1863, p. 34.

Turdus pallens, Pall.

Turdus pallidus, Naum. (not Gmel.).

One specimen from the Pelews (*Capt. Heinsohn*), where this species has not yet been recorded.

13. RHIPIDURA VERSICOLOR, n. sp.

Supra fusca; fronte et sincipite late rufis; gula alba, infra nigro-circumdada; pectore albido nigroque maculato; abdomine pallidius fusco, medio albicante; tectricibus caudæ superioribus subcaudalibusque rufis; remigibus fusco-nigricantibus, tectricibus alarum dorso concoloribus; subalaribus albidis; reatricibus obscure fuscis, late albo terminatis, 4 mediis basi rufis; rostro et pedibus fuscis.

Upper parts a rich brown with a slight reddish tinge; forehead bright rufous; upper and under tail-coverts rufous; throat white, margined underneath by an irregular jugular band of pure black; pectoral plumes black, broadly margined with yellowish white; middle of abdomen whitish, sides of a paler olive-brown; under wing-coverts whitish; wing-feathers blackish brown; tail-feathers brownish black, all largely tipped with white, the four middle ones rufous at the base, the white terminal spots becoming smaller towards the middle; beak fuscous, the under mandible paler except at the tip; feet fuscous.

Long. tot. circa 5" 9"', rostr. a fr. 4½"', al. 2" 6"', caud. 3" 3"', tarsi 8'''.

Three specimens, collected by Mr. Kubary at the island of Uap. This typical new species resembles much *Rh. lepida*, nob. (from Pelew), and *Rh. torrida*, Wall., but may be distinguished at once from both by its tail-feathers being largely tipped with white.

“‘Atabruë’ of the natives” (*Kubary*).

A nest sent by Mr. Kubary in form and structure resembles much that of *Rh. nebulosa*, as described by us (*Orn. Centr. Polyn.* p. 87).

14. MYIAGRA ERYTHROPS, H. & F., P. Z. S. 1868, pp. 6 & 117.

One specimen from the Pelews (*Capt. Heinsohn*), not different from the specimens already received. In this specimen not only the front, but also the forehead to the anterior eye-margin is of a vivid rufous.

15. MONARCHES GODEFFROYI, Hartl., P. Z. S. 1867, p. 829, pl. xxxviii.

Eleven specimens in the three different plumages as figured, all collected by Mr. Kubary on the island of Uap.

Three specimens, white beneath and above, with black head, quills, and tail, agree with the description of the old bird and the figure in front. These are marked as males by the collector, and seem to represent the full-plumaged bird.

Two specimens, marked as female, have a broad white collar round the neck; the remainder of the under-surface is black, like the specimen represented in the middle figure, but the mantle is throughout black.

Besides, there are six specimens in the fulvous plumage, like the figure in the background. Our description of this stage being somewhat short and imperfect, we think it necessary to give a more complete one, as follows:—

Supra cineraceo-rufescens; pileo et nucha sordide cinereis, uropygio et supracaudalibus dilute rufescentibus; alarum tectricibus remigibusque fuscis, rufo marginatis; subcaudalibus et subalaribus albido-rufescentibus; subtus dilute rufescens, gula et abdomine medio magis albicantibus; oculis pallido rufo circumdatis; rectricibus fusco-nigricantibus, macula apicali alba, extimæ latius albo terminatæ pogonio externo pallide rufulo; rostro fuscescente, basi pallido; pedibus nigricantibus.

Back rufescent grey; head above dark cinereous, sides of head rufescent; a pale fulvous ring round the eye; posterior part of back and upper tail-coverts light rufous; wing-coverts, tertiaries, and scapularies dark fuscous, with broad rufous margins; in the primaries these margins are reduced to an almost imperceptible narrowness; tail-feathers dark fuscous, with a white terminal spot; in the outer this white spot is much larger, and the external vane is pale reddish; underparts light rufous; throat and middle of abdomen rather whitish; under wing- and under tail-coverts whitish with a more or less rufescent tinge; feet bluish; beak brownish, pale at the base; eyes black.

PROC. ZOOLOGICAL SOCIETY.—1872, No. VII.

The rufous colour of the underparts varies in intensity, being in some specimens paler and mixed with whitish on the middle of vent, in others uniform cinnamon-rufous or dark rufous.

According to Mr. Kubary, who notes these specimens as males, they belong to a different species; but we are quite sure that they are really the young of *M. godeffroyi*. There is one specimen which shows undoubted signs of change from the red plumage into the black, having the head here and there intermixed with black feathers; the middle tail-feathers are already black; and the cinnamon of the rump and upper tail-coverts is varied with white.

Long. al.	caud.	rostr. a fr.	lat. rostr.	tars.	
3'' 2'''	2'' 9'''	6½-6¾'''	3'''	10-11'''	♂ (3)
3 0 -3'' 2'''	2 8	—	3-3¼	—	♀ (2)
2 11 -3 1	2 7-2'' 9'''	6½-7	—	—	juv. (6)

The black and white bird is the "Gigi" of the natives; the young rufous bird is called "Golai."

16. CAMPEPHAGA NESIOTIS, n. sp.

Jun. *Supra rufescenti-fusco fulvoque sordide varia; pileo nuchaque cinerascens; superciliis rufis; uropygio et supracaudalibus dilute rufo fuscoque transversim notatis; gastræo dilute cinnamomeo-rufo, pectore fasciis rarioribus strictissimis nigris notato; tectricibus alarum minoribus dorso concoloribus; majoribus, remigibus tertiariis scapularibusque fusco-nigricantibus, late rufo marginatis, majorum limbo externo strictissimo areaque majore pogonii interni rufis; subalaribus unicoloribus rufis; reatricibus duabus intermediis fuscis apice fulvo marginatis, lateralibus fuscescenti-nigris macula apicali majore fulva, extimæ pogonio externo fulvo, nigro marginato; rostro et pedibus nigris.*

Long. tot. circa 9½'', rostri 10½'', alæ 4'' 5'', caudæ 3'' 10'', tarsi 12'''.

Back rich brown, indistinctly mottled with fulvous; head above and nape darker and more greyish; eyebrows and frontal plumes rufous; posterior part of back and upper tail-coverts transversely variegated with rufous and dark brown; beneath light rufescent or fulvous, some narrow black bands on the breast; under wing-coverts and under tail-coverts of a uniform light rufous; wing-coverts like the back; scapulars and smaller wing-feathers blackish, with broad rufous margins, primaries with a very narrow rufous external margin, the inner vanes of all from the base with a larger rufous marginal space; the two middle tail-feathers brown, margined with rufous at the tip, the lateral ones blackish with a larger fulvous terminal spot, the external one black with a very broad apical part and a narrow longitudinal band on the outer vane light rufous; bill and feet black.

Two specimens from the island of Uap, discovered and sent by Captain Peters. Both specimens are alike, and in the rufous dress of the young bird or female. The old bird will certainly show a

quite different coloration, but nevertheless prove to be specifically distinct. At least, all our endeavours to unite these rufous-coloured specimens with any of the known species have been unsuccessful. They have, however, great resemblance to the females of *C. melæna*, Müll., and some other Moluccan species.

“ ‘Astang’ of the natives ; very rare ” (*Kubary*).

17. *CAMPEPHAGA MONACHA*, n. sp.

Saturate cæsia ; plumis supranasalibus lorisque latius nigris ;
rectricibus alarum remigibusque nigris, dorsi colore marginatis,
his poyonio interno a basi ultra medium latissime albo mar-
ginatis ; subalaribus indistincte fuscatis ; subcaudalibus limbo
apicali vix conspicue albidis ; rectricibus intermediis obscure
cæsiis, apice late nigris, reliquis nigris, omnibus limbo apicali
albidis ; rostro et pedibus nigris.

Jun. Supra sordide et obsolete griseo-fuscescens, hinc inde nigro
fulvoque transversim notata ; subtus fulva, maculis nigris sub-
triquetris rarius variegata ; gutture immaculato ; remigibus
nigricantibus, dilute rufescente marginatis ; rectricibus mediis
sordide rufulis, lateralibus fusco-nigricantibus, apice margineque
dilute rufescentibus ; subalaribus et subcaudalibus læte et
dilute fulvis, his striis scapularum rarioribus nigris ; rostro et
pedibus nigricantibus.

Long. tot. circa 8" 6"', rostri a fr. 7½"', al. 3" 8"', caud. 3",
tarsi 9½"'

Ad. All over of a dark bluish grey ; lores and a small frontal band velvet-black ; throat somewhat darker ; wing-feathers black, coverts and smaller remiges with a broad margin of bluish grey ; this margin is very narrow on the greater ones, and does not extend to the tip ; an oblique white belt on the inner vanes ; intermediate tail-feathers dark bluish grey with broad black tips, lateral ones black, all with a narrow whitish terminal margin ; under wing-coverts indistinctly barred ; under tail-coverts bluish grey, with a very narrow apical margin of white ; bill and feet black.

No species of the widely distributed group of Campephagine birds has been yet recorded from the Pelew Islands. For the discovery of this interesting new species we are indebted to Capts. Heinsohn and Peters ; the first-named gentleman sent the young, the last-named the old bird, from the Pelews.

This species comes nearest to *C. morio*, Temm., from Celebes ; but the latter is larger, and has the sides of head, chin, and throat black.

18. *ARTAMUS LEUCORHYNCHUS* (Gmel.) ; H. & F., P. Z. S. 1868, p. 116.

One specimen agreeing with the one mentioned by us from the Pelews ; but the bill is of a delicate light cobalt-blue, with dark tip.

19. *RECTES TENEBROSUS*, H. & F., P. Z. S. 1868, pp. 6 & 117.

Two specimens from the Pelew Islands (*Capt. Peters*) agreeing

with the type-specimen described by us. We are now of opinion that this plumage is not that of the young bird, but of the old.

Long. al.	caud.	rostr.	tars.
3" 6"-3" 8"	2" 6"-2" 7"	8"	12"

20. *CALORNIS KITTLITZI*, F. & H.; Hartl. P. Z. S. 1867, p. 830; H. & F. *ibid.* 1868, pp. 7 & 117.

Three specimens from Mackenzie Island (*Capt. Peters*), and two from Uap (*Kubary*), where this species had not been previously observed.

One specimen, determined as female by Mr. Kubary, agrees in colour with the old male; a young one (marked as male) is of a uniform sooty brown, with slight metallic reflexions on the upper parts. "Iris yellow" (*Kubary*).

The dimensions vary very much in this species, but do not equal those of the allied *C. corvina*, Kittl., from Ualan.

Long al.	caud.	rostr.	tars.
4" 4"-4" 10"	2" 8"-3" 3"	8 $\frac{1}{2}$ -9 $\frac{1}{2}$ "	12 -13" (Pelew, 9 spec.)
4 7 -5 0	2 9 -3 4	8 $\frac{1}{2}$ -9	13 $\frac{1}{2}$ -14 (Mackenzie, 9 spec.)
4 6 -4 8	2 7 -3 0	9 -9 $\frac{1}{2}$	13 -14 (Uap, 2 spec.)

21. *CUCULUS CANORUS*, L.; Swinh. P. Z. S. 1863, p. 264.

Cuculus telephonus, Heine, jr., Journ. f. Orn. 1863, p. 352.

An old specimen from the Pelew Islands (*Capt. Heinsohn*) proves to be specifically identical with our common Cuckoo. In comparing this specimen with an old male from Germany, we can notice only that the white underparts are tinged very faintly with yellowish, and that the dark cross bands on the under tail-coverts are less marked. The zigzags on the anal region are absent.

I have also seen in the Leyden collection a specimen labelled "Luçon," which was entirely similar to the European bird.

Long. al.	caud.	culm.	rictus.	tars.	dig. ext.
7" 10"	6" 1"	10"	13 $\frac{1}{2}$ "	9 $\frac{1}{2}$ "	10 $\frac{1}{2}$ " (Pelew.)
8 1	6 4	9 $\frac{1}{2}$	13 $\frac{1}{2}$	9 $\frac{1}{2}$	10 (Germany.)

The occurrence of the Common Cuckoo in the Pelews is a new fact in the geographical distribution of this species.

22. *CUCULUS STRIATUS*, Drapiez; Schleg. Mus. P.-B. *Cuculi*, p. 7.

Cuculus himalayanus, Swinh. P. Z. S. 1863, p. 265.

Three specimens from the Pelews (*Capt. Heinsohn and Peters*) are nearly in full plumage—one changing the feathers of the upper parts from brown into dark slate, and two young ones in the dark rufous plumage barred with dark. I have for comparison only an old specimen from Amboina at hand, which shows no difference.

Long. al.	rectr. med.	culm.	rictus.	tars.	dig. ext.
7" 1"	5" 1"	8 $\frac{1}{2}$ "	12"	7 $\frac{1}{2}$ "	9 $\frac{1}{2}$ " (ad., Pelew.)
7 3	5 7	8	12	8 $\frac{1}{2}$	9 (juv., Pelew.)
7 5	5 5	8 $\frac{1}{2}$	12	8 $\frac{1}{2}$	9 (juv., Pelew.)
7 0	5 4	8 $\frac{1}{2}$	12	7 $\frac{1}{2}$	8 $\frac{1}{2}$ (ad., Amboina.)

New to the Pelews.

Peale's *C. fucatus*, from Mangsi, in the Sooloo archipelago (*C. tenuirostris*, Cass. Atl. pl. 21. f. 1) belongs not to this species, but to the smaller *C. micropterus*, Bl. (Schleg. *Cuculi*, p. 12 = *C. tenuirostris*, Cab. & Heine, Mus. Hein. p. 39, nec *C. tenuirostris*, Müll.).

23. *PTILINOPUS PELEWENSIS*, H. & F., P. Z. S. 1868, p. 7.

Six specimens from the Pelews (*Capt. Peters and Heinsohn*), agreeing exactly with the description given by us, as cited above. The outermost secondaries (the so-called tertiaries) have an acute angulated shaft-end spot of brilliant violet-blue; the under tail-coverts are bright purplish red, with narrow bright orange edgings; feet dark blood-red; bill lead-coloured, with greenish-white tips.

Young bird. Green, with narrow yellow edgings on the tectrices and scapulars; head above also green, with a pale yellow supercilium; underparts dirty olive-green; vent, anal region, and under tail-coverts straw-yellow; on the vent some orange feathers; tail green, with a whitish patch on the inner webs above the end, forming an irregular cross band; feet and bill dark.

Long. al.	caud.	rostr.	
4" 10"–5"	2" 7"	6–6½"	(5 spec.)
4 8	2 4	6	(juv.)

24. *CARPOPHAGA OCEANICA* (Less.); Hartl. P. Z. S. 1867, p. 830.

Carpophaga pacifica, H. & F., P. Z. S. 1868, p. 7.

One old specimen from the Pelew group (*Capt. Heinsohn*), agreeing exactly with the figure of Kittlitz (Kupfert. 33. f. 1), who observed the bird on the island of Ualan (Denkwürdigk. i. p. 377). We must remark that none of the specimens we have examined from this group show the ferruginous-vinaceous tinge on the crop and breast, although this tinge is sometimes also wanting in specimens from the Navigator and Friendly groups. But, what is more significant, the Pelew specimens have the grey on the head and hind neck much darker; besides, the under wing-coverts are brownish black, whereas in *C. pacifica* from Central Polynesia they are of a dark ashy grey. The chestnut-red on the vent, anus, and under tail-coverts appears to be also much darker in Pelew specimens. Therefore we incline to believe that the *Carpophaga* from the north-western Pacific Islands may form a distinct species—the *Columba oceanica* of Lesson; but before we can settle this question with certainty we must wait for further examination, based upon more specimens.

25. *PHLEGÆNAS CANIFRONS*, n. sp.

Supra olivaceo-virescens, nitore nonnullo metallico; occipite, collo postico et interscapulio læte ferrugineis; fronte et sincipite, capitis, colli et pectoris lateribus cinereis; gula et collo antico magis albicantibus; alis dorso concoloribus, area majore scapulari pulchre violaceo-purpurascente; remigibus fuscis, pogonio

interno a basi inde pro majore parte rufis; subalaribus rufis; abdomine sordide griseo-fuscescente; rectricibus intermediis dorso concoloribus, reliquis intense fuscis, ante apicem rufescentem obscurius adumbratis; rostro nigricante; pedibus rubris.

Back, wings, upper tail coverts, and median tail-feathers of a rich olive-bronze green; forehead, top and sides of the head, sides of neck, and breast plumbeous grey; throat and fore neck vinaceous whitish; posterior part of head and neck and interscapulars of a rich rufous; a large shoulder-spot purplish violet; abdomen of a dirty and dark greyish brown; wing feathers blackish, the inner vane from the base for more than two thirds rufous, which colour does not quite reach to the shaft, the outer vane with a reddish tinge for the same extent; under wing-coverts rufous; lateral tail-feathers fuscous, somewhat darker before the slightly rufescent tip; the middle ones more like the back. beak blackish; feet red; nails brown.

Long. tot. circa 10", rostr. a fr. $8\frac{1}{2}$ ", al. 4" 2", caud. 2" 9", tars. 1".

A single specimen, collected by Capt. Peters on the Pelews, and apparently in full plumage. This is a very remarkable species, distinguished by the grey of the forehead and along the sides of the neck, and by the cinnamon-rufous of the occiput and hind neck, besides by its small size.

26. PHLEGGENAS YAPENSIS, n. sp.

Jun. av. *Supra sordide rufa; pilea unicolori; dorsi et uropygii plumis, alarum tectricibus, scapularibus, remigibus tertiariis et supracaudalibus fuscis, large rufo marginatis; pectore cinerascente rufoque nebuloso; abdominis plumis fuscescentibus, apice rufescentibus; subalaribus obscure fusco rufoque variis; subcaudalibus fusco-nigricantibus; area scapulari obscure violaceo-purpurascente; remigibus majoribus fuscis, margine apicali extremo rufo; rectricibus obscure rufis, ante apicem late nigris; rostro (ut videtur) flavido, pedibus nigricantibus.*

Juv. *Dorso nitore virescenti-metallico valde conspicuo; alarum tectricibus scapularibusque minus virescentibus; capite toto rufo; pectore et abdomine obsolete rufescentibus, illo nitore nonnullo subviolacescente lavato; subalaribus et subcaudalibus obscure rufis; cauda ut in ave modo descripta; rostro nigricante.*

Long. tot. circa 10", rostri $7\frac{1}{2}$ ", al. 5" 3", caud. 3" 6", tars. 13".

Two immature specimens. The elder bird (marked as male) has the upper and lateral part of the head light rufous; the feathers of the whole back, the wing-coverts, the scapularies, and tertiaries are of a dark brown, with broad margins of pale rufous; a large shoulder-spot purplish violet, mixed with pale rufous; primaries of a uniform blackish brown; tail-feathers light rufous, with a broad black band before the tip; the throat seems to be of a dirty rufescent colour; the feathers of the breast pale bluish grey margined with rufous, those of the abdomen and under tail-coverts blackish, variegated with obsolete rufescent shades; under wing-coverts of an obscure mixture of

black and rufous; bill yellowish, darker round the base; feet plumbeous, with pale nails.

A *still younger bird* (marked as female) is rather differently coloured, the back being of a dark olivaceous green, with bronze reflexions; wing-coverts, tertiaries, and scapularies also more greenish, with broad rufous margins; no purplish shoulder-spot; the whole head light rufous; breast and abdomen of an indistinct olivaceous-rufescent hue; under wing-coverts rufous; tail as in the elder bird.

Long. al.	caud.	rostr.	tars.	dig. med.
5" 4"	3" 6"	7 $\frac{1}{2}$ "	14"	11" (♂)
5 0	3 4	7	13 $\frac{1}{2}$	11 (♀)

Mr. Kubary has sent only these two specimens, which unfortunately represent two different stages of the imperfect bird. The one marked as female shows some resemblance to the rare Pigeon from the Mariannes named by Bonaparte *Pampusana rousseaui*. Although neither specimen is in full plumage, we do not hesitate to introduce the species as new, as there are certain signs which lead us to expect that the old bird will prove its specific distinctness.

"The 'Arolit,' as the species is called by natives, is the only Pigeon inhabiting the island of Uap, and is of very rare occurrence there. The Arolit lives in the interior of the wood, far from the settlements of the natives" (*Kubary*).

27. *MEGAPODIUS SENEX*, Hartl. P. Z. S. 1867, p. 830; H. & F. *ibid.* 1868, p. 7.

Two old specimens from Pelew (*Capt. Peters* and *Heinsohn*), and the very young in the first plumage. This resembles very much the "*Alecthelia durvillei*," Less. (Voy. Coq. pl. 37), which is the young of *M. freycineti*; but the head and upper parts are dark olive-brown, the rump and caudal down red-brown; chin and throat yellowish; feet dark reddish brown.

The *Megapodius senex* is an excellent species, distinguished at once by the very small vivid-yellow bill, the brownish-grey crested cap, the yellowish or brownish legs, and black toes.

Long. al.	caud.	rostr.	riet.	tars.	dig. med.	ung.
6" 8"	2" 2"	7"	11"	2" 2"	17"	8"
6 4	1 11	7	12	2 1	18	8

The collection contains also one egg of this species, which, in size, form, and coloration, is almost nearly undistinguishable from that of *M. pritchardi*, Gray. Length 2" 9", breadth 1" 8".

28. *GALLUS BANKIVA*, Temm.

Capt. Peters has sent from the Pelews a single female specimen, but unfortunately he does not state whether the Jungle-fowl lives in a wild state on the islands, or as in Uap, as Mr. Kubary remarks (*in litt.*), only in a half-wild state.

The specimen agrees entirely with a hen from Sumatra; only the

golden-yellow feathers on the hind neck are paler; besides, it is somewhat paler in colour.

Long. al.	caud.	rostr.	riet.	tars.	dig. med.
7"	5" 1"	6½"	13"	26"	18"

“Mallett” of the natives.

Wild Jungle-fowls have not yet been recorded from the Pelews. Mr. Kubary notices the very rare occurrence of half-wild fowls in the interior of Uap.

29. *CHARADRIUS FULVUS*, Gmel.; H. & F., P. Z. S. 1868, pp. 8 & 117.

One specimen from Pelew (*Capt. Heinsohn*), two from Mackenzie (*Capt. Peters*), and three from Uap (*Kubary*).

As regards the specific distinctness of this species from *Ch. pluvialis* we must refer to what we have said (*Journ. f. Orn.* 1870, p. 139). The specimens contained in this collection confirm our opinion, as will be shown in the following measurements:—

Long. al.	caud.	rostr.	tars.	tib. med.	dig. med.
6" 0" -6" 4"	2" 0" -2" 3"	10-11"	18-20"	9-11"	10-11" (Uap.)
6 4 -6 7	2 1 -2 4	10-11	21	10-12	12 (Mackenzie.)
6 0	2 0	10	19	9	10½ (Pelew.)

“‘Kuling’ of the natives” (*Kubary*).

30. *STREPSILAS INTERPRES* (L.); Hartl. P. Z. S. 1868, p. 831; H. & F. *ibid.* 1868, p. 8.

Specimens from Pelew (*Capt. Heinsohn*), Mackenzie (*Capt. Peters*), and Uap (*Kubary*). Some of them still show signs of the summer plumage; others are in the perfect winter dress.

“‘Kuling’ of the natives” (*Kubary*).

31. *ARDEA SACRA*, Gmel.; Hartl. P. Z. S. 1867, p. 831; H. & F. *ibid.* 1868, pp. 8 & 118.

Fourteen specimens from the Pelews (*Capt. Peters*) and Uap (*Kubary*); amongst them eight slate-coloured specimens, five white ones, and one in the reddish-brown plumage of the young bird.

The great variation in colour and size which this species exhibits we have already explained several times, especially in our paper on the birds of the Tonga Islands (*Journ. f. Orn.* 1870, p. 136). We have also stated that the white birds are by no means young ones. The large collection before us confirms all these statements fully.

There are two slate-coloured females, one with a narrow interrupted, the other with a broad well-defined white stripe on chin and throat, shot in December 1870, on which Mr. Kubary notices on the label, “ovaries with full-developed eggs, some more than 2" long;” whereas he remarks on a uniform white male shot at the same time, “testicles very large.” This latter male specimen is in full plumage, with full-grown scapular feathers, whereas one of the slate-coloured females shows still some moulting-feathers.

Two white females, shot in September, have the wings mixed more or less with slate-coloured feathers.

One female, shot in December, is strongly in moult, especially on the neck, where the new dark slate-coloured feathers predominate over the old reddish-brown feathers, the remains of the young plumage.

The old slate-coloured male, shot in December, there is only a small white spot on the middle of the throat. Another male, shot in September, has no white feathers at all. The dimensions are, as usual, very variable.

Long. al.	rostr.	tars.	dig. med.
9" 9" ^m -11"	3" 1"-3" 7" ^m	2" 9"-3" 3" ^m	23-38" (12 spec. from Uap.)

Mr. Kubary has observed both the dark and white bird fishing in company. These birds frequent chiefly the lagoons, and roost on the mangroves near the shore. The nest consists only of an excavation of the ground, bordered by stems of grass (?). The natives distinguish the black bird under the name "Khau," the white as "Wunensy," and believe the different colorations to be sexual.

Concerning this species see also v. Kittlitz (Denkwürd. einer Reise, i. p. 368), who observed the bird on Ualan.

32. ARDEA SINENSIS, Gmel.

Ardea lepida, Horsf.

Six specimens from Uap, collected (in the beginning of October) by Mr. Kubary and Capt. Peters.

"Irides yellow" (*Kubary*).

They agree in every respect with specimens from Java.

Long. al.	caud.	rostr.	tars.	dig. med.
4" 7" ^m -5" 1" ^m	19-20" ^m	22-23" ^m	20-21" ^m	17-18½" ^m

The Western Carolines are a new locality for this widely-distributed species.

The "Thogil," as the bird is called by the natives, resorts chiefly to the mangrove-scrub on the shore.

33. NYCTICORAX GRISEUS (L.).

One specimen from Uap (*Kubary*) in the spotted plumage of the young.

Mr. Kubary notices this species as a very rare visitor on the island of Uap during the north-east monsoon.

Long. al.	caud.	rostr.	riect.	tars.	tib.	dig. med.
10" 6" ^m	3" 9" ^m	2" 5" ^m	3" 4" ^m	2" 5" ^m	6" ^m	2" 4" ^m

"The natives call this 'Orror;' it is very rare" (*Kubary*).

34. NYCTICORAX MANILLENSIS, Vig.; Schleg. Mus. P.-B. *Ardea*, p. 60.

Nycticorax caledonicus, H. & F., P. Z. S. 1868, p. 117 (Pelew).

Two old and a young specimen from the Pelew Islands (*Capt. Heinsohn*).

In our last list of the birds of the Pelew Islands we have inserted this species wrongly as *N. caledonicus*, from which it seems to differ specifically in having the back, shoulders, and wing-coverts of a much darker cinnamon-castaneous; the neck is also darker. The young birds differ also a good deal from the young of *N. caledonicus*, having the sides of head and the front of the neck brown, each feather with a narrow white shaft-stripe.

Long. al.	caud.	rostr.	rict.	tars.	tib.	dig. med.
10" 3'''-11"	3" 7'''-3" 11'''	2" 6'''-2" 9'''	3" 4'''-3" 8'	3"-3" 2'''	12-15'''	2" 4'''-2" 6''

35. NUMENIUS PHÆOPUS, Lath. ; Hartl. P. Z. S. 1867, p. 831; H. & F. *ibid.* 1868, p. 8.

Two specimens from Uap (*Kubary*), and one from the Pelews (*Capt. Peters*).

There is no difference between these and European specimens.

"Lives in great swarms; roosts during night on trees" (*Kubary*).

36. TRINGA ACUMINATA, Horsf. ; H. & F., P. Z. S. 1868, p. 8.

One specimen from Pelew (*Capt. Heinsohn*), agreeing with the specimen received formerly thence, but smaller. Similar to Australian specimens.

Long. al.	caud.	rostr.	tars.	tib.	dig. med.
5" 2'''	2" 1'''	11½'''	14'''	6'''	11½'''
4 10	2 0	11	12½	7	10

37. TRINGA MINUTA, Leisl. ; H. & F., P. Z. S. 1868, p. 3.

One specimen in winter dress from Pelew (*Capt. Peters*).

38. ACTITIS INCANUS (Gmel.), F. & H. Orn. Centr. Polyn. p. 182.

One specimen from Uap (*Kubary*) in the barred summer plumage. Not yet recorded from this locality.

Long. al.	caud.	rostr.	tars.	dig. med.
6" 5'''	2" 5'''	18'''	14'''	11½''' (Uap.)
6" 2'''-6 8	2" 5'''-2 9	16½-17	13½-15	11½-12 (Upolu, 6 spec.)

Specimens from the Navigators, (Upolu), shot in September by Dr. Gräffe, bear different plumages. One has still the banded summer dress; others have already partially or totally assumed the uniform winter dress. Von Kittlitz observed this species on Ualan, in the Eastern Carolines (*Tringa glareola*, Denkwürd. i. p. 365).

39. ACTITIS HYPOLEUCUS, L. ; H. & F., P. Z. S. 1868, p. 8.

One specimen from Pelew (*Capt. Peters*).

40. RALLINA FASCIATA (Raffl.).

Gallinula euryzona, Temm.

Rallina fasciata, Hartl. P. Z. S. 1867, p. 831; H. & F. *ibid.* 1868, p. 7.

Three old and one young specimens (*Capt. Heinsohn* and *Peters*) from Pelew.

There is no difference whatever between these and specimens from Java and Malacca.

Long. al.	rostr.	tars.	dig. med.
4" 5'''-4" 9'''	9-9½'''	17½-19½'''	12-13'''

41. RALLUS PECTORALIS, Less.

Rallus philippensis, Hartl. P. Z. S. 1867, p. 831.

Rallus pectoralis, H. & F. *ibid.* 1868, pp. 8 & 117.

Three species from the Pelew Islands (*Capt. Heinsohn* and *Peters*). In one the cinnamon cross band on the breast is well marked, in the other barely visible; in a younger one it is wanting totally. In one the black feathers on the hind neck have only white marginal spots; in the other they are barred distinctly with white.

Long. al.	caud.	culm.	tars.	dig. med.	
5" 3'''	2" 4'''	13½'''	19'''	17'''	(Pelew.)
4 9	—	12½	17	15	"
4 4	—	11	17½	16	"

42. ORTYGOMETRA QUADRISTRIGATA, Horsf.; H. & F., P. Z. S. 1868, p. 8.

Old and young birds from Pelew (*Capt. Peters*) and Uap (*Kubary*). This latter is a new locality for this extremely widely distributed species.

As we have already shown in our work on Central-Polynesian Ornithology (p. 166), specimens from the Navigators' Islands and Java agree in every respect.

The size varies considerably.

"Breeding-season in July and August. The bird, named by the natives 'Bal,' lives in the wooded region, and is here plentiful. It has a loud voice. Its nest is very roughly made in the grass. It is often attacked by the Galufs (*Hydrosaurus marmoratus*), a species of Lizard about 3 feet long." (*Kubary*.)

43. PORPHYRIO MELANONOTUS, Temm., var. PELEWENSIS, nob.

Porphyrio melanotus, H. & F., P. Z. S. 1868, p. 8 (Pelew); *id.* *ibid.* p. 117.

Four specimens from the Pelew Islands (*Capt. Peters*), which again prove the smaller size to be a constant character of the race of the Pelew group, as they have the wings and tarsus always considerably shorter. The bill and frontal shield vary as much as in *P. melanotus*, with which in coloration it agrees perfectly. As in that species, the remiges show more or less a blue shining margin along the outer web; the blue patch on the humerus in some specimens is brighter. If the notice "legs yellow," given formerly by

one of M. Godeffroy's collectors, should be right, no doubt the *Porphyrio* of the Pelews would rank as a species; but we doubt this, because, so far as we can judge from the dried skins, the colour of the legs in life is red as in *P. melanonotus*.

We append for comparison measurements taken from eight specimens from Pelew, and seven of the true *P. melanonotus* from Australia and New Zealand.

Long. al.	caud.	rostr. incl.	scut. latit. scut.	rict.	tars.	tib.	dig. med.
7" 10'''-8" 3'''	2" 9'''-3" 2'''	2" 1'''-2" 8'''	6½-13'''	15-17½'''	2" 9'''-3" 0'''	12-15'''	2" 10'''-3" 1'''*
9 7 -10 9	3 3 -4 1	2 3 -2 10	8 -11½	16-19	3 4 -3 9	15-22	3 1 -3 7 †

44. *ANAS SUPERCILIOSA*, Gmel., var. *PELEWENSIS*, H. & F.

A. superciliosa, Hartl. P. Z. S. 1867, p. 832; H. & F. *ibid.* 1868, p. 8.

Two specimens from the Pelews (*Capt. Heinsohn*), which agree perfectly with specimens from New Zealand and Australia, except in their smaller size. Having examined four specimens, which all exhibit this peculiarity, we consider the Pelew bird to belong to a smaller race.

The superciliary stripe, sides of head, chin, and throat are a little more rufescent; but this cannot be noticed as a character of specific value, this tinge being in some specimens much paler, and almost the same as in certain specimens from New Zealand. The dark stripe from the angle of the mouth also varies in intensity, and is nearly altogether wanting in some specimens.

The two last-received specimens show another strange peculiarity, in two or three of the outer secondaries (the so-called tertiaries) having on their dark-brown outer web three or four longitudinal light-brown patches, forming sometimes a broad longitudinal stripe.

A. luzonica, Fras. (P. Z. S. 1839, p. 112), seems to be an excellent species, being described as having head and neck "*pallide castanea*," and a white cross band on the wings, formed by the white band of the tectrices of the secondaries.

Long. al.	caud.	rostr. a front.	Alt. max. ad bas.	Latit. max. ad apic.	Long. tars.	dig. med.
' 8'''-8" 6'''	3" 0'''	18 -19½'''	6-7'''	8½-9'''	15½-16'''	18-20''' (Pelew, 4 ex.)
0 -9 6	3"-3 4	20½-22	8-8½	9 -9½	17 -18	21-23 (New Zeal., 6 ex.)

45. *PUFFINUS DICHROUS*, H. & F. Orn. Centr. Polyn. p. 244.

Procellaria obscura, Kuhl (nec Gmel., nec auct.), Zool. Beitr. iii. (1820) p. 147, t. xi. f. 11 (cap.); Temm. Man. d'Orn. ii. (1820), p. 808 (sol. descr.); Schleg. Mus. P.-B. *Procell.* (1863) p. 30 (syn. emend.).

Puffinus opisthomelas, var. *minor*, Hartl. P. Z. S. 1867, p. 382; H. & F. *ibid.* 1868, pp. 9 & 371; Finsch, J. f. Orn. 1870, p. 371.

? *Puffinus obscurus*, Degl. Orn. Europ. ii. p. 366 (syn. excl.); Degl. & Gerbe, *ibid.* sec. ed. p. 380.

? *Procellaria obscura*, Schleg. & Pollen, Rech. Faun. Mad. p. 144.

* Pelew.

† Austr., New Zealand.

Upper parts, including wing and tail, sooty black; this colour extends from the angle of the mouth, bordering the eye beneath, to the middle of the ear-region; the sides of the neck and breast sooty greyish black, tipped narrowly with whitish; remainder of the underparts white; the central and lateral under tail-coverts sooty black, some of the former very narrowly margined at the apex with white; the anterior central under tail-feathers greyish black, towards the basal half whitish, and with broader white apical margins; under wing-coverts white, along cubitus and manus bordered with sooty-black feathers; the remiges on the inner web towards the base become paler brownish; the tectrices of the secondaries very faintly and narrowly tipped with whitish; there is a slight indication of a white line bordering the eye underneath; bill hornish, dark brown, tip paler; inside of tarsus, toes, and membranes pale hornish yellow; external toe and outside of tarsus dark blackish brown, lighter, into brownish yellow towards the basal half of tarsus; nails blackish; the tail is somewhat cuneate, the tips of the quills reach to about one third from the end of the tail.

In former collections from the Pelews we examined five specimens; this last collection contains six adult and two young examples, all collected by Capt. Heinsohn.

There exists little variation amongst these specimens; we notice only that in some specimens the under tail-coverts are throughout sooty black, in others the anterior lateral under tail-coverts are white at the greater basal portion of the inner web. The very faint whitish tips of the tectrices of the secondaries are in some specimens almost wanting; the sides of the thighs have sometimes a greyish dark mark.

The two nestlings are clothed uniformly with thick greyish-brown down, changing on the middle of the underparts into white. Coloration of feet as in old birds. The young from M'Kean's Island are precisely similar.

Through the kindness of Dr. Cabanis we received the type of our *P. dichrous* from M'Kean's Island (collected by Dr. Gräffe), and now deposited in the Berlin Museum. After a careful comparison, we have not the slightest doubt as to its identity with Pelew specimens. The type specimen of *P. dichrous*, the only one we ever received from the Central Pacific, has a little shorter wings. The anterior lateral under tail-coverts are white on the greater portion of the inner web, just as in some specimens from the Pelews. The coloration is quite the same.

In our previous memoirs on the Pelew birds we took this Petrel, although with some doubt, for *P. opisthomelas*, noticing the considerably smaller size. Having now examined about a dozen specimens from the Pelews, in comparison with the type specimen, we find the smaller size to be constant, and cannot unite them with those noticed by Mr. Coues, after the two specimens from Cape St. Lucas, Lower California (coll. Xantus) in the collection of the Smithsonian Institution, and the figure given by Mr. Elliot (Introd. B. N. Am. fig. head, natural size). In coloration there seems to exist no considerable

difference from *P. opisthomelas*: the dark colour extends in both below the lores and eyes; the under tail-coverts are fuliginous black, &c. In respect to colour our species is also closely allied with *P. anglorum*, Temm., but this latter has only the outer row of the under tail-feathers black on the outer web, and is nearly as large as *P. opisthomelas*.

To this last-named species belongs *Puffinus obscurus*, Vieill. Gal. Ois. t. 301 (tab. sol. excl. descr.).

We are not fully acquainted with the geographical distribution of *P. dichrous*, having only seen specimens from the Pelews and M'Kean's Island. Schlegel notices it from Bourbon, and also a specimen (said to be one of the types of Temminck's *P. obscurus*) from the Atlantic; but this latter locality requires confirmation.

This species is the *P. obscurus* of Kuhl, Temminck, and Schlegel, and perhaps of Degland and Gerbe, who confounded it, as nearly all authors do, with the true *Pr. obscura* of Latham and Gmelin. In respect to this latter very confused species we are able to give some notes, which perhaps will be of some use:—

PUFFINUS OBSCURUS (Gmel.).

Dusky Petrel, Lath. Gen. Syn. iv. p. 416 (Christmas Island).

Procellaria obscura, Gmel. S. N. p. 559 (ex Lath.); Bechst. Lath. Traus. iii. p. 364 (inaccr.); Lath. Ind. Orn. ii. p. 828; Vieill. Enc. Méth. i. p. 81 (ex Lath.); *id.* Gal. Ois. p. 230 (nec tab. 301).

Puffinus obscurus, Reichb. Schwimmvög. Novit. t. vi. f. 2250, 2251 (ex Mus. Dresd.); Bp. Consp. ii. p. 202 (ex Lath., syn. excl.); Verr. MS. (Madagascar); Hartl. Madag. p. 84 (excl. syn.).

Nectris gama (nec Bp.), Hartl. Madag. p. 84 (excl. syn.).

? *Procellaria obscura*, Schleg. & Pollen, Rech. Faune Madag. p. 161 (syn. *Nectr. gama*, Hartl.).

This species, black above, white beneath, may be distinguished at once by the uniform pure white under tail-coverts; the black on the upper parts does not reach beyond the loreal and auricular regions; the tarsus and feet are yellowish, with the external toe and outside of tarsus partially black.

M. Jules Verreaux, in his excellent manuscript notes, describes this species from Madagascar, Bourbon, and Mauritius, whence he received specimens through Telfair, Desjardin, and Sganziu. A specimen in the Stuttgart Museum, from Madagascar, has been referred by Dr. Hartlaub to *Nectris gama*; but the true *N. gama*, Bp. (Consp. ii. p. 202) is different, although a very doubtful species.

I have examined the Madagascar specimen in the Stuttgart Museum (labelled *P. baillonii*), and noticed the external lateral under tail-coverts on the outer web black.—F.

P. obscurus inhabits the Indian Ocean (Christmas Island, Latham; Madagascar, Bourbon, Mauritius, Verr.). As regards its occurrence in Europe, as first mentioned by Temminck ('Alpes du Piémont'), and America, we have no trustworthy evidence. Schlegel (Vogels van Nederland, p. 585) says, "several times obtained on our shores;" but later (Mus. P.-B. p. 30), "Je ne connais pas

d'exemple bien constaté que cet oiseau ait été observé sur les côtes d'Europe."

Indeterminable are the following references, usually referred to *P. obscurus* :—

Puffinus obscurus, Schleg. Vog. van Nederl. p. 585 (perhaps *P. assimilis*, G.); *id.* Rev. Crit. p. cxxxiii ("Nördliches Europa!").

Nectris obscura, Keys. & Blas. Wirbelth. Eur. p. 94 ("Mittelländisches Meer, Südküste Nordamerika's").

Puffinus obscurus, Linderm. (Vögel Griechenl. p. 171) and Krüper (Journ. f. Orn. 1863), belongs to *P. anglorum*, Ray, or the hardly different Mediterranean form *P. yelkuan*, Acerbi.

Puffinus obscurus, Gould (B. Eur. pl. 444), we have had no opportunity of comparing.

PUFFINUS ASSIMILIS, Gould, P. Z. S. 1837, p. 186; *id.* B. of Austr. vii. t. 59; Reichb. Schwimmv. f. 2600 (ex Gould); Gray, Gen. of B. iii. p. 647 (syn. *P. nugax*, Sol. MS.).

Puffinus nugax, Bp. Consp. ii. p. 205; Schleg. *Procell.* p. 31; Gould, Handb. B. Austr. ii. p. 458; Finsch & Hartl. Centr. Polyu. p. 242; Coues, Proc. Acad. Phil. 1864, p. 141.

Puffinus assimilis, Gray, Ibis, 1862, p. 244.

Puffinus obscurus, Gray, B. Trop. Isl. p. 55; Finsch, Journ. f. Orn. 1870, p. 371.

Like *P. obscurus*, but smaller; the under tail-coverts also uniform white; but the white of the underparts mounts up on the sides of the head, including loreal and auricular regions; tarsi greenish yellow, webs bright chrome-yellow.

In the Pacific seas of Australia and New Zealand.

[I was wrong in my note (cited above) in stating this to be the true *P. obscurus*, Gmel.—F.]

[In the Royal Museum at Munich I have examined two specimens of a *Puffinus* from Madeira, brought home by H.G. the Duke of Leuchtenberg, which apparently belong to this species. They agree very well with the characters noticed above. The under tail-coverts are white, only the lateral ones at the base of the outer web dark, but this hidden.—F.]

PUFFINUS AUDUBONI, Finsch.

Puffinus obscurus, Audub. Syn. B. N. Am. 1839, p. 339; Baird, B. N. Am. p. 835; Coues, Proc. Acad. Phil. 1864, p. 137; Licht. Nomencl. p. 100.

Like *P. assimilis*, but the under tail-coverts fuliginous-black; the anterior lateral under tail-feathers are on the outer vane black, on the inner white; the white on the sides of the head extends, as in *P. assimilis*, not below the level of the eyes; bill deep leaden blue; feet and legs coloured as in *P. anglorum*.

This species inhabits the Atlantic Ocean, occurring not unfrequently along the shores of the Southern United States and in the Gulf of Mexico; it is abundant in the Bahamas and Bermuda.

I have examined a fine specimen in the Berlin Museum, collected by Mr. Deppe at Cape Florida (mentioned by Bonaparte as *P. floridanus*, Consp. ii. p. 204). "*P. l'herminieri*, Less.," cited by Bonaparte (Consp. pp. 189 and 204) as synonymous with this species, is not to be found in Lesson's 'Tr. d'Orn.'

We have before us a specimen of *Puffinus* from the Viti Islands, collected by Dr. Gräffe. It is the one mentioned by us as *P. nugax* (Centr. Polynesian, pp. 243 and 280, t. iii. f. 5), inserted only on the authority of Dr. Gräffe, who sent eggs from Viti Levu marked as those of this species. On comparing the specimen, the only one we have yet seen from this locality, we find it not to be the true *P. assimilis*, but a different species, which we are not able to make out. It resembles most *P. auduboni*, in having also the white not extended beneath the loreal region and eye, and the under tail-coverts fuliginous-black; but the specimen is smaller. Further researches must be made to settle this difficult species with certainty; we do not feel able to do so, having but a single specimen before us.

Long. tot.	Long. al.	Ap. al.	Caud.	Rostr. a fr.	Rostr. a rict.	Alt. rostr. a bas.	Tub. nas.	Tars.	Dig. med. (sine ung.).	
c. 11 $\frac{1}{2}$ -13	7 $\frac{2}{7}$	7 $\frac{2}{1-3}$	2 $\frac{10-3}{11}$	11 $\frac{1}{2}$ -12 $\frac{1}{2}$	15-16 $\frac{1}{2}$	3 $\frac{3}{4}$ -4	2-3	16-17	16-17	<i>dichrous</i> (Pelew, 11 spec.).
...	6 11	2 4	2 11	11	16	4	2	16	15	— (M'Kean Isl., type).
...	7 3	...	2 9	13 $\frac{1}{2}$	18	4	...	20	20	— (<i>obscurus</i> , ap. Kuhl).
...	7 3	2 3	2 11	13	...	3 $\frac{1}{2}$	2	17	16	— (—, Schleg., Bourbon).
...	7 0	2 3	2 10	12 $\frac{1}{2}$	...	3	2	17	16	— (—, Atl. Oc.).
...	9 0	...	3 75	1 40''	24	...	...	1 80''	2 10''	<i>opisthomelas</i> (ex Coues).
...	8 7	...	3 4	16	20	...	...	19	19	— (<i>obscurus</i> , Vieill. ap. pl.).
...	...	...	...	14 $\frac{1}{2}$	...	4	...	...	...	— (ex Elliot's fig.).
...	7 9	...	...	13	...	...	...	17	16	<i>auduboni</i> (Florida, Berl. Mus.).
...	8 0	...	4 25	1 25''	1 70''	...	...	1 60''	...	— (<i>obscurus</i> , Coues).
...	6 6-6	11 2	5-3 9 2	2-2 7	11 -12	...	...	16-17	15-17	<i>assimilis</i> , Gould (ex Schleg.).
...	6 3-6	6	...	...	11	...	...	15	...	Madeira.
...	7 9	...	3 2	14	...	...	...	17	...	<i>obscurus</i> , Gmel. (ex Gama, Hartl.).
...	7 0	2 5	2 6	14	19 $\frac{1}{2}$	3 $\frac{1}{4}$	1 $\frac{1}{2}$	16	16	spec. ?, Vitis.

46. STERNA LONGIPENNIS, Nordm.; F. & H. Orn. Centr. Polyn. p. 220 (syn. part.).

One specimen from the Pelews (*Capt. Heinsohn*), not in full plumage. Only the occiput and nape are black; forehead brownish, with darker shaft-stripes; the feathers of the grey upper parts with narrow pale edges; the three outer tail-feathers on the outer web grey, the remainder only washed with grey; the small wing-coverts along the humerus dark brown, forming a longitudinal band; bill black; feet reddish.

Long al.	rectr. ext.	rectr. interm.	culm.	altit. ad bas.	tars.	dig. med.
9'' 6'''	4''	2'' 8'''	14'''	3'''	9'''	8'''

The specific differences of *St. frontalis*, Gray, from New Zealand, which we formerly erroneously confounded with this species, have been pointed out already (Journ. f. Orn. 1870, p. 365).

The Pelew Islands are a new locality for *St. longipennis*.

47. STERNA MELANAUCHEN, Temm.; F. & H. Centr. Polyn. p. 224.

Two adult specimens, one from the Pelews (*Capt. Heinsohn*), the other from Uap (*Kubary*). Both localities are new for this species.

48. STERNA LUNATA, Peale; Hartl. P. Z. S. 1867, p. 331; H. & F. *ib.* 1868, pp. 9 & 118.

One specimen from Pelew (*Capt. Peters*).

49. ANOUS STOLIDUS (L.); H. & F., P. Z. S. 1868, p. 9 (Pelew).

Seven specimens from the Pelews (*Capt. Heinsohn and Peters*). They agree exactly with specimens from N. America and Africa, but vary in the intensity of the dark colouring, and especially as regards the coloration of the head. In some the front and forehead are greyish white, changing into pale grey on the occiput and nape, and into pale ashy grey on the hind neck; in others the whole surface of the head is pale brownish grey. In one paler-coloured, apparently younger, specimen the head is uniform sooty brown like the neck, but mixed with single white feathers, which, above the black loreal regions, form an indistinct white supercilium. In all the specimens the lower half of the eye is margined narrowly with white; the legs and toes are blackish, the membranes lighter.

As regards the variation in size in this species, we must remark that the specimen from North America spoken of in Ornith. Centr. Polyn. p. 236, has not full-grown remiges, the first being just developing; from this cause the wing is much shorter.

We append the measurements of the Pelew specimens, to show the individual variation amongst specimens from the same locality.

Long. al.	rectr. longiss.	culm.	rictus.	altit. ad bas.	tars. long.	dig. med.	
10" 5'''	6" 0'''	17'''	24'''	4 $\frac{1}{4}$ '''	10 $\frac{1}{2}$ '''	14'''	(Pelew Islands.)
10 9	5 3	16	23	5	10 $\frac{1}{2}$	14	"
10 9	5 2	17	24	4 $\frac{1}{2}$	11	13 $\frac{1}{2}$	"
10 8	5 8	16	24 $\frac{1}{2}$	4	11	14	"
10 8	6 3	18	27	4 $\frac{1}{2}$	11	14	"
10 9	6 3	19	27	4 $\frac{1}{2}$	11	14	"
10 3	6 2	16 $\frac{1}{2}$	..	4 $\frac{1}{2}$	10 $\frac{1}{2}$	14	"

50. ANOUS TENUIROSTRIS (Temm.).

? *Sterna senex*, Cranch in Tuckey's Voy. Zaire (1818), App. p. 407.

Sterna tenuirostris, Temm. (nec Rüpp., nec Heugl.) Pl. Col. 202; (Temm.) Kittl. Kupfert. Heft iii. (1833), p. 28, f. 2, tab. 36. f. 1 (opt.).

PROC. ZOOL. SOC.—1872, No. VIII.

Anous leucocapillus, Gould, P. Z. S. 1845, p. 103; Finsch & Hartl. Orn. Centr. Polyn. p. 237.

Sterna tenuirostris et *S. leucocapilla*, Schleg. Mus. P.-B. *Sterna*, p. 37.

Eight specimens from the Pelew Islands (*Capt. Heinsohn and Peters*), where this species has not been hitherto noticed. This species differs from *A. stolidus* in its smaller size, the slender and nearly straight bill, the darker, more sooty-black coloration, and the purer, silvery-white surface of the head. In most of the specimens there is a dark greyish tinge on the temporal region, the hind neck and sides of neck. The younger bird is more of a sooty-brown coloration (as in *A. stolidus*), and has the upper wing-coverts partially margined with bright umber-brown. A still younger bird has the front and vertex already as pure white as the old one; and this is also seen in the nestling young, which is covered with black down. The legs are pale, as in *A. stolidus*, brownish or yellowish brown, in some yellowish. We see no reason for separating *A. leucocapillus*, Gould, from *A. tenuirostris*, Temm. The dimensions noticed by Prof. Schlegel are not sufficient to distinguish two species.

Long.	al.	rectr.	long.	culm.	riet.	altit.	rostr.	tars.	dig.	med.
8"-8"	9"	4"-4"	7"	18-21"	24-27"	3½-4"	9-9½"	11-12½"	(Pelew, 8 spec.)	

Kittlitz gives a very accurate representation of this species (Kupfert. t. 36. f. 1), which he collected in the Carolines and also near St. Helena.

51. GYGIS ALBA (Sparrm.); Hartl. P. Z. S. 1867, p. 832; H. & F. *ibid.* 1868, pp. 9 & 118.

From the Pelews (*Capt. Peters*), and a beautiful pair (male and female) from Uap, where Mr. Kubary notices the species as rare.

In the Eastern Carolines, observed by v. Kittlitz on the island of Ualan (Denkwürdigk. i. p. 382).

52. PHAËTON CANDIDUS, Briss.

Phaëton flavirostris, Brandt.

Two adult specimens from the Pelew Islands (*Capt. Peters*). In one (collected by Capt. Heinsohn) all the white feathers above and below, including the two black-shafted middle tail-feathers, are strongly tinged with pale orange-rose (as in Reichenbach's fig. 852, tab. xxx.).

This species breeds on the Pelew group. In a former collection thence, forwarded by Mr. Godeffroy, we received the young in the first plumage.

The 'Novara' expedition procured a specimen (in October) on the Stewart group; and v. Kittlitz observed it in Ualan, Eastern Carolines (Denkwürdigk. einer Reise &c. i. p. 382).

53. CARBO MELANOLEUCUS, Gray; H. & F., P. Z. S. 1868, p. 9.

Two adult specimens from the Pelew Islands (*Capt. Peters*).